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10/578,262	10/04/2006	Christian Wengerter	L7725.06108	2098

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EXAMINER	
SAFAIPOUR, BOBBAK	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,262	WENGERTER ET AL.	
	Examiner	Art Unit	
	BOBBAK SAFAIPOUR	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *45-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *45-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/GB/08) Paper No(s)/Mail Date *5/4/06, 8/4/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicants elected Group I, Claims 45-72 and 78-80, however, argue that no unduly extensive or burdensome search would be required to examine the various claims of the noted Groups in the same application. Upon further review, the Examiner agrees. Therefore, the previous restriction requirement has been withdrawn.

As a result, claims 45-80 are still pending in the present application.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements submitted on 05/04/2006 and 08/04/2006 have been considered by the Examiner and made of record in the application file.

Claim Objections

Claim 79 is dependent on cancelled claim 42. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 45-55, 58-67, and 69-80 are rejected under 35 U.S.C. 102(b) as being anticipated by **Yu et al. (US 6,047,186; hereinafter Yu).**

Consider **claim 45,** Yu discloses a method for balancing the distribution of interference between radio cells in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein a number of adjacent radio cells build a cell cluster, the method comprising the steps of:

grouping said subcarrier blocks into a plurality of subcarrier block sets in each radio cell of the cell cluster (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determining a plurality of transmission power ranges for each of the radio cell of said cell cluster, wherein a transmission power range defines a range of transmission power levels used for transmission power control (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

assigning the plurality of transmission power ranges to the subcarrier block sets of radio cells of the cell cluster (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 50,** Yu discloses a method for balancing the distribution of interference between radio cells in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein N adjacent radio cells build a cell cluster, N being an integer number of 2 or more, the method comprising the steps of:

grouping said subcarrier blocks into N subcarrier block sets in each radio cell of the cell cluster, wherein the radio cells of the cell cluster each comprise corresponding subcarrier block sets having the same subcarriers (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determining N transmission power ranges for each of the radio cell of said cell cluster, wherein a transmission power range defines a range of transmission power levels used for transmission power control (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

assigning N transmission power ranges to the N subcarrier block sets of radio cells of the cell cluster, such that each of the N transmission power ranges in a radio cell is assigned to one of the N subcarrier block sets of said radio cell, and each of the N transmission power ranges is assigned to one subcarrier block set of corresponding subcarrier block sets (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 51,** Yu discloses a method for balancing the distribution of interference between radio cells in a wireless communication system, the system comprising a plurality of radio cells each of them comprising at least two sectors, wherein in each sector a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein a number of adjacent radio cells build a cell cluster, the method comprising the steps of:

grouping said subcarrier blocks into a plurality of subcarrier block sets in each of the sectors of each radio cell of said cluster (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determining a plurality of transmission power ranges for each sector of each radio cell of the cell cluster, wherein a transmission power range defines a range of transmission power levels used for transmission power control (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the

sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

assigning the plurality of transmission power ranges to the plurality of subcarrier block sets of a sector of a radio cell and its adjacent sectors of said other radio cells (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 69,** Yu discloses a base station in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein a number of adjacent radio cells build a cell cluster, the base station comprising:

processing unit operable to group said subcarrier blocks into a plurality of subcarrier block sets in each radio cell of the cell cluster (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determination unit operable to determine a plurality of transmission power ranges for each of the radio cell of said cell cluster (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

power control unit operable to perform power control within a range of transmission power levels defined by one of said plurality of transmission power ranges (col. 5, lines 15-18 and 21-24; weak connection zones),

assigning unit operable to assign the plurality transmission power ranges to the subcarrier block sets of radio cells of the cell cluster (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 73,** Yu discloses a base station in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein N adjacent radio cells build a cell cluster, N being an integer number of 2 or more, the base station comprising:

processing unit operable to group said subcarrier blocks into xN subcarrier block sets in each radio cell of the cell cluster, wherein the radio cells of the cell cluster each comprise corresponding subcarrier block sets having the same subcarriers, x being an integer number of 1 ore more (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determination unit operable to determine yN transmission power ranges for each of the radio cell of said cell cluster, y being an integer number of 1 ore more, power control unit operable to perform power control within a range of transmission power levels defined by one of

said plurality of transmission power ranges (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

assigning unit operable to assign yN transmission power ranges to the xN subcarrier block sets of radio cells of the cell cluster, such that each of the yN transmission power ranges in a radio cell is assigned to one of the xN subcarrier block sets of said radio cell, and y/x transmission power ranges on average are assigned to one subcarrier block set of corresponding subcarrier block sets (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 74,** Yu discloses a base station in a wireless communication system, the system comprising a plurality of radio cells each of them comprising at least two sectors, wherein in each sector a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, and wherein a number of adjacent radio cells builds a cell cluster, the base station comprising:

processing unit operable to group said subcarrier blocks into N subcarrier block sets in each of the sectors of each radio cell of said cluster, wherein each sector of a radio cell has N-1 adjacent sectors in the other radio cells of the cell cluster, and wherein a sector of a radio cell and its adjacent sectors in said other radio cells each comprise corresponding subcarrier block set

having the same subcarriers, N being an integer number of 2 or more (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determination unit operable to determine N transmission power ranges for each sector of each radio cell of the cell cluster, power control unit operable to perform power control within a range of transmission power levels defined by one of said plurality of transmission power ranges (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

assigning unit operable to assign the N transmission power ranges to the N subcarrier block sets of a sector of a radio cell and its adjacent sectors of said other radio cells, such that in a sector, each of the N transmission power ranges in a sector of a radio cell is assigned to one of the N subcarrier block sets of said sector, and each of the N transmission power ranges is assigned to one subcarrier block set of corresponding sectors (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 75,** Yu discloses a base station in a wireless communication system, the system comprising a plurality of radio cells each of them comprising at least two sectors, wherein in each sector a plurality of subcarrier blocks is used for communication, wherein each

subcarrier block comprises a plurality of subcarriers, and wherein N adjacent radio cells builds a cell cluster, the base station comprising:

processing unit operable to group said subcarrier blocks into xN subcarrier block sets in each of the sectors of each radio cell of said cluster, wherein each sector of a radio cell has N-1 adjacent sectors in the other radio cells of the cell cluster, and wherein a sector of a radio cell and its adjacent sectors in said other radio cells each comprise corresponding subcarrier block set having the same subcarriers, x being an integer number of 1 ore more and N being an integer number of 2 or more (col. 5, lines 1-5; each of the plurality of cells is subdivided into sectors, and wherein the method and system assign specific groups of channels drawn from the plurality of groups of channels to each sectors),

determination unit operable to determine yN transmission power ranges for each sector of each radio cell of the cell cluster, y being an integer number of 1 ore more (col. 5, lines 8-14; One or more pairs of the sectors within the defined geographic area wherein a weak connection zone exits are determined. The defined geographic area is decomposed into two or more sub-areas composed of one or more of the sectors and wherein each sub-area is isolated from other sub-areas by the determined one or more pairs of sectors having a weak connection zone),

power control unit operable to perform power control within a range of transmission power levels defined by one of said plurality of transmission power ranges, assigning unit operable to assign the yN transmission power ranges to the xN subcarrier block sets of a sector of a radio cell and its adjacent sectors of said other radio cells, such that in a sector, each of the yN transmission power ranges in a sector of a radio cell is assigned to one of the xN subcarrier block sets of said sector, and y/x transmission power ranges on average are assigned to one

subcarrier block set of corresponding sectors (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.).

Consider **claim 78,** Yu discloses a communication terminal in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, the communication terminal comprising power control unit operable to perform power control between a base station of a radio cell communicating with the communication terminal, wherein the power control unit is operable to perform power control in a transmission power control range in an interval defined by a transmission power level of 0 and a maximum transmission power level. (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.)

Consider **claim 80,** Yu discloses a radio communication system comprising a base station according to claim 69 and a communication terminal in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, the communication terminal comprising power control unit operable to perform power control between a base station of a radio cell communicating with the communication terminal, wherein the power control unit is operable to perform power control in a transmission power control

range in an interval defined by a transmission power level of 0 and a maximum transmission power level. (col. 5, lines 15-18 and 21-24; Frequency groups are assigned to each sector within the first selected sub-area such that signal to noise ratio is optimized across the first selected sub-area.)

Consider **claim 46,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein the radio cells of the cell cluster each comprise corresponding subcarrier block sets having the same subcarriers. (figures 1-3)

Consider **claim 47,** and **as applied to claim 46 above,** Yu discloses the claimed invention wherein said plurality transmission power ranges is assigned to the subcarrier block sets of radio cells of the cell cluster, such that in a single radio cell, there is a mapping of each of said plurality of transmission power ranges to a subcarrier block set of said single radio cell, and there is a mapping of each of said plurality of transmission power ranges to one of said corresponding subcarrier block sets in the radio cells of said cell cluster. (col. 5, lines 1-44)

Consider **claim 48,** and **as applied to claim 46 above,** Yu discloses the claimed invention wherein said plurality transmission power ranges is assigned to the subcarrier block sets of radio cells of the cell cluster, such that in a single radio cell, there is a mapping of each of said plurality of subcarrier block sets of said single radio cell to a transmission power range, and there is a mapping of each of said corresponding subcarrier block sets in the radio cells of said

cell cluster to one of said plurality of transmission power ranges. (col. 5, lines 1-44)

Consider **claim 49,** and **as applied to claim 47 above,** Yu discloses the claimed invention wherein the mapping is a unique or one-to-one mapping. (figures 1-3)

Consider **claim 52,** and **as applied to claim 51 above,** Yu discloses the claimed invention wherein each sector of a radio cell has adjacent sectors in the other radio cells of the cell cluster, and wherein a sector of a radio cell and its adjacent sectors in said other radio cells build a sector cluster and each comprise corresponding subcarrier block set having the same subcarriers. (figures 1-3)

Consider **claim 53,** and **as applied to claim 52 above,** Yu discloses the claimed invention wherein said plurality of transmission power ranges is assigned to the subcarrier block sets of radio cells of the cell cluster, such that in a single sector of a radio cell, there is a mapping of each of said plurality of transmission power ranges to a subcarrier block set of said sector, and there is a mapping of each of said plurality of transmission power ranges to one of said corresponding subcarrier block sets in said sector cluster. (col. 5, lines 1-44)

Consider **claim 54,** and **as applied to claim 51 above,** Yu discloses the claimed invention wherein said plurality of transmission power ranges is assigned to the subcarrier block sets of radio cells of the cell cluster, such that in a single sector of a radio cell, there is a mapping of each of said plurality of subcarrier block sets of said sector to a transmission power range, and

there is a mapping of each of said plurality of said corresponding subcarrier block sets in said sector cluster to one transmission power range. (col. 5, lines 1-44)

Consider **claim 55,** and **as applied to claim 53 above,** Yu discloses the claimed invention wherein the mapping is a unique or one-to-one mapping. (col. 5, lines 1-44)

Consider **claim 58,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein the transmission power ranges in different radio cells/sectors vary. (col. 5, lines 1-44)

Consider **claim 59,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein the subcarrier block set size of corresponding subcarrier block sets is equal. (figures 1-3)

Consider **claim 60,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein further comprising the step of reconfiguring the subcarrier block sets in a radio cell/sector of radio cell. (col. 5, lines 1-44)

Consider **claim 61,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein further comprising the step of reconfiguring the transmission power ranges in a radio cell/sector of a radio cell. (col. 5, lines 1-44)

Consider **claim 62,** and **as applied to claim 60 above,** Yu discloses the claimed invention wherein the reconfiguration of the power ranges and/or the subcarrier block sets in the radio cell is performed in accordance with the other radio cells of its cell cluster. (col. 5, lines 1-44)

Consider **claim 63,** and **as applied to claim 60 above,** Yu discloses the claimed invention wherein the reconfiguration of the power ranges and/or the subcarrier block sets in the sector is performed in accordance with the other sectors of its sector cluster. (col. 5, lines 1-44)

Consider **claim 64,** and **as applied to claim 60 above,** Yu discloses the claimed invention wherein the reconfiguration is based on channel quality measurements. (col. 5, lines 1-44)

Consider **claim 65,** and **as applied to claim 45 above,** Yu discloses the claimed invention wherein further comprising the step of signaling information related to a reconfiguration of the subcarrier block sets in a radio cell/sector from the/its radio cell to at least one adjacent radio cell/sector. (figures 1-3)

Consider **claim 66,** and **as applied to claim 61 above,** Yu discloses the claimed invention wherein further comprising the step of signaling information related to channel qualities in a radio cell/sector from the/its radio cell to at least one adjacent radio cell/sector. (figures 1-3)

Consider **claim 67,** and **as applied to claim 65 above,** Yu discloses the claimed invention wherein further comprising the step of signaling the information to a control unit in the communication system. (col. 5, lines 1-44)

Consider **claim 70,** and **as applied to claim 69 above,** Yu discloses the claimed invention wherein the radio cells of the cell cluster each comprise corresponding subcarrier block sets having the same subcarriers. (col. 5, lines 1-44)

Consider **claim 71,** and **as applied to claim 69 above,** Yu discloses the claimed invention wherein said assigning unit is operable to assign said plurality transmission power ranges to the subcarrier block sets of radio cells of the cell cluster, such that in a single radio cell, there is a mapping of each of said plurality of transmission power ranges to a subcarrier block set of said single radio cell, and there is a mapping of each of said plurality of transmission power ranges to one of said corresponding subcarrier block sets in the radio cells of said cell cluster. (col. 5, lines 1-44)

Consider **claim 72,** and **as applied to claim 69 above,** Yu discloses the claimed invention wherein said assigning unit is operable to assign said plurality transmission power ranges to the subcarrier block sets of radio cells of the cell cluster, such that in a single radio cell, there is a mapping of each of said plurality of subcarrier block sets of said single radio cell to a transmission power range, and there is a mapping of each of said corresponding subcarrier block sets in the radio cells of said cell cluster to one of said plurality of transmission power ranges.

(col. 5, lines 1-44)

Consider **claim 76,** and **as applied to claim 69 above,** Yu discloses the claimed invention wherein the base station is adapted to perform a method for balancing the distribution of interference between radio cells in a wireless communication system, the system comprising a plurality of radio cells in which a plurality of subcarrier blocks is used for communication, wherein each subcarrier block comprises a plurality of subcarriers, wherein a number of adjacent radio cells build a cell cluster, the method comprising the steps of: grouping said subcarrier blocks into a plurality of subcarrier block sets in each radio cell of the cell cluster, determining a plurality of transmission power ranges for each of the radio cell of said cell cluster, wherein a transmission power range defines a range of transmission power levels used for transmission power control, assigning the plurality of transmission power ranges to the subcarrier block sets of radio cells of the cell cluster. (col. 5, lines 1-44)

Consider **claim 77,** and **as applied to claim 73 above,** Yu discloses the claimed invention wherein further comprising: measuring unit operable to measure the path loss of a communication signal of a communication terminal and the path loss due to interference among adjacent sectors for said communication signal, and the assigning unit is operable to assign the communication terminal to one of said subcarrier block sets based on said measurements. (col. 5, lines 1-44)

Consider **claim 79,** and **as applied to claim 42 above,** Yu discloses the claimed invention wherein further comprising receiving unit operable to receive information indicating a subcarrier block assignment and/or a subcarrier block set assignment, and selection unit operable to select the signaled assigned subcarrier block and/or signaled assigned subcarrier block set for data transmission. (col. 5, lines 1-44)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 56-57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yu et al. (US 6,047,186)** in view of **Craig et al. (US 6,882,847 B2; hereinafter Craig).**

Consider **claim 56,** and **as applied to claim 45 above,** Yu discloses the claimed invention except for wherein the communication system comprises a plurality of communication terminals communicating with base stations associated to said plurality of radio cells/sectors, the

method further comprising the steps of: measuring the path loss of a communication signal of a communication terminal and the path loss of interference from adjacent radio cells/sectors for said communication signal, and assigning the communication terminal to a subcarrier block of a subcarrier block set in a radio cell/sector based on said measurement.

In related art, Craig discloses a communication system comprises a plurality of communication terminals communicating with base stations associated to said plurality of radio cells/sectors, the method further comprising the steps of: measuring the path loss of a communication signal of a communication terminal and the path loss of interference from adjacent radio cells/sectors for said communication signal, and assigning the communication terminal to a subcarrier block of a subcarrier block set in a radio cell/sector based on said measurement. (col. 5, lines 49-65)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the pathloss measurements of Craig into the wireless communication system of Yu to increase the spectral efficiency of the telecommunication system.

Consider **claim 57,** and **as applied to claim 56 above,** Yu, as modified by Craig, discloses the claimed invention wherein further comprising the step of determining a transmission power range for said communication terminal based on said measurement, and wherein the communication terminal is assigned to a block set based on the determined transmission power range. (col. 5, lines 49-65)

Consider **claim 68,** and **as applied to claim 56 above,** Yu, as modified by Craig, discloses the claimed invention wherein further comprising the step of signaling information related to a subcarrier block assignment and/or a subcarrier block set assignment to a communication terminal. (col. 5, lines 49-65)

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Bobbak Safaipour
B.S./bs

December, 2009

/Matthew D. Anderson/

Supervisory Patent Examiner, Art Unit 2618